DOCUMENT RESUME

ED 282 923 TM 870 343

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TITLE	Increasing the Utility of Research via the Application of Multiple-Model Designs.
SPONS AGENCY	Louisiana State Dept. of Education, Baton Rouge.
PUB DATE	22 Apr 87
NOTE	15p.; Paper presented at the Annual Meeting of the American Educational Research Association (Washington, DC, April 20-24, 1987).
PUB TYPE	Speeches/Conference Papers (150) -- Reports - Evaluative/Feasibility (142)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Case Studies; Data Collection; *Disabilities; Evaluation Utilization; Interviews; Matrices; Measurement Techniques; *Naturalistic Observation; Preschool Education; Preschool Evaluation; *Qualitative Research; Questionnaires; *Research Methodology; State Programs; *Statistical Analysis
IDENTIFIERS	Louisiana; Louisiana State Department of Public Education; Multiple Data Gathering Methods

ABSTRACT

This paper discusses the experiences and insight derived from the 1985-1986 Statewide Evaluation of the Early Education Program of Handicapped Children in Louisiana, the multimethod evaluation of preschool intervention projects for handicapped and at-risk children. The program served almost 5,000 handicapped preschoolers and their parents, providing 17 different kinds of services in home-based, center-based and combination program formats. The multiple-model design applied in this program evaluation consisted of four segments: (1) a prefatory naturalistic inquiry to provide a foundation for the design matrix and to check the appropriateness of the evaluation components; (2) first-wave case studies and a qualitative approach to develop data-collection strategies and instruments that were specific to the identified service roles; (3) second-wave case studies or a combination of qualitative interviews and surveys/questionnaires to complete the final drafts of the 13 role-specific instruments; and (4) third-wave research or the integration of the case study/observation component with a major data collection effort that consisted of service provider and parent surveys, an interagency focus group interview, and the aggregation statewide of class and individual student profiles. The use of this multimethod approach facilitated the identification and investigation of 14 program-related issues. It also resulted in a high level of cooperation on the part of state, regional and local program personnel, parents, and kindergarten teachers as evidenced by high return rates on surveys and questionnaires and by requests for additional feedback. (JAZ)

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INCREASING THE UTILITY OF RESEARCH VIA THE APPLICATION OF MULTIPLE-MODEL DESIGNS

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Paper presented at the annual meeting (session #26.03) of the American Educational Research Association, Washington, D. C., April 22, 1987. Funding for this evaluation was provided through Cooperative Agreement Number: G0084C3509, Project Number: 159AH40011, between the United States Department of Education and the Louisiana State Department of Education. No endorsement is implied.

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The present paper discusses one SDE's experiences and insights derived from conducting a large-scale, multisite, multimethod evaluation of preschool intervention projects for handicapped and at-risk children. The purposes of the study were to define the program models that were operating and to identify characteristics of the models that contributed to program efficiency and efficacy. Subsumed in the design was the identification and analysis of appropriate, broad-based outcome measures. **The purpose of the present paper is to discuss some of the challenges of this type of evaluation and to share with the reader alternative designs, strategies, and instrumentation used to meet these challenges.**

Theoretical Framework

In the research and evaluation literature it is not uncommon to find repeated laments by program evaluators and researchers about decision makers' tendencies to give their results inadequate consideration in the decision-making process (e.g., Kilbourne & DeGracie, 1979; King, Thompson, & Pechman, 1981). While disillusionment related to the nonuse of research and evaluation findings has resulted in an increased interest in qualitative methods (Fetterman, 1982), and may be related to what some authors (e.g., Rist, 1977) have described as a rapprochement of the qualitative and quantitative paradigms, the fact remains that there are inherent contradictions in the philosophical assumptions, methods, and purposes of the two paradigms (Smith & Heshusius, 1986; Thompson, 1986). However, as Bower, Anderson, and Thompson (1986, p. 31) have noted, the two paradigms "can be usefully employed in a given evaluation study . . . and may also facilitate greater use of evaluation results."

The implications of the efficacy of multi-model approaches, such as the integration of the qualitative and quantitative paradigms, are apparent. According to Smith (1986), the multimethod design "diversifies bias" and strives for "maximally divergent" assessment of program effects (p. 42). Through the use of such designs, evaluators and researchers can observe and study the basic program operation, as well as the personal interactions and relationships embedded in the program. With its multifaceted perspective, this type of research and evaluation can provide insights into programs not obtained by other investigative means.

Research and evaluation based upon the integration of different models can be a medium through which information that has utility and applicability can be shared. The information may be shared not only with the persons who **decide policy**, but also with those who **implement policy**. The use of the multi-model approach represents a continuing trend in seeking answers to questions about the condition of education across the nation.

Naturalistic Inquiry

According to Geertz and Wolcott (cited in Williams, 1986), if the evaluation consumers want qualitative portrayals, leading ideally to a vicarious experience of the evaluand as it functions naturally, then a naturalistic evaluation is essential. No other method devotes the time and intensity required to gather and report such rich detail (p. 86). Naturalistic inquiry permits investigators to immerse themselves in the field in order to observe phenomena as they occur, hopefully without interfering with the natural order; to collect a mass of qualitative data that describe concerns and perspectives of the participants; and also, to locate within the natural order those persons who are rich sources of information (Patton, 1980).

Naturalistic inquiry is defined by Willems and Rausch (1969) as "the investigation of phenomena within and in relation to their naturally occurring context" (p. 3). The term naturalistic inquiry (Lincoln & Guba, 1985) is considered a generic term for many kinds of qualitative appraisals. Eisner (1977) named it "educational connoisseurship and criticism"; Patton used the term "qualitative evaluation methods"; and Fetterman (1984) called it "ethnographic educational evaluation." Williams (1986), in his Editor's Notes, cites a variety of labels--"qualitative research, ethnography, participant observation, and field work" (p. 1). Hebert (1986), on the other hand, defines naturalistic evaluation as a "process by which evaluators seek to know and understand an evaluand, then to present their knowledge and understanding to others" (p. 3).

Evaluators are cautioned by Williams "to be on site regularly over time so they can become quasi-participants and gain insiders' perspectives as they are naturally manifested" (p. 89). While Lewin (1979, p. 282) describes the role of the naturalistic observer as a relatively passive one, Patton (1980, p. 189) cites the ability of the observer to become a part of the situation and to understand personally what is happening as the "strength of naturalistic inquiry." Reinforcing both these ideas, Williams (1986, p. 88) notes that "naturalistic evaluations minimize data-gathering activities that interrupt the natural state of the evaluand by employing evaluators as participant observers who gather evaluation information informally over time while the evaluand is in natural operation." And finally, Patton notes that total immersion in an evaluand may facilitate the researcher's understanding of "the setting under study through direct personal contact and experience with the program" (p. 43).

Case-Study Methodology

In his discussion of case studies, Patton notes that the purpose of case study research is "to gather comprehensive, systematic, and in-depth information" (p. 303). Lewin expresses a similar view, noting that the goal of case study research "is to describe in detail the pattern and interrelation of the variables which are active in a particular concrete instance" (p. 286).

The case-study method uses multiple evaluation strategies and can capture the individuality of the program, as well as estimate its effectiveness based on the experiences and perceptions of the personnel involved in the program, according to Fehrenbacher, Owens, and Haenn (1976). Other authors (e.g., Firestone & Herriott, 1984; Smith & Robbins, 1984) have asserted that the multi-site, targeted case study is emerging as a popular design, especially in large-scale, federal projects. It can be systematic by defining, in advance, the unit of analysis and the primary and secondary sources of information. Its objectivity can be enhanced through the independence of the researchers, through the integration of the data, and through the extent to which the focus and methodology are made known to the participants. Fehrenbacher, Owens, and Haenn (1976) have also noted that the objectivity of the case study can be enhanced through the use of an independent reviewer.

While the tasks associated with case-study research can be awesome and time consuming, Yin (1984) has proposed a methodological approach that has merit. He suggests that, prior to entering the field, the researcher formulate a plan of entry, develop protocols and instruments to collect the data, and decide on the unit of analysis, as well as the method of analysis. As he notes, this procedure gives the evaluator the flexibility to proceed inductively without a hypothesis or proposition. One of the attractive features of this procedure is that, in some cases, it allows the researcher or evaluator to return to the design, modifying it in response to new information needs identified as the study progresses, or the evaluation improves. Yin further suggests the establishment of a chain of evidence to connect the original study questions to the protocols, the data collection, the data analysis, and ultimately, the final report.

Integration of Qualitative and Quantitative Data Bases

In his discussion of evaluation, Smith (1986, p. 37) has noted that "the whole is greater than the sum of the parts when qualitative and quantitative approaches and methods are combined." Noting a trend toward more "mixed-method studies," Williams (p. 2), has indicated that, increasingly, evaluators are combining "naturalistic components (such as participant observations and repeated informal interviews) with more traditional tests, questionnaires, and structured interviews."

Qualitative and quantitative methods can complement each other. While "qualitative research designs require that the evaluator get close to the people and situations studied in order to understand the minutiae of program life" (Patton, 1980, p. 43), quantitative methods permit evaluators to extend data collection to all program participants, and thus, to widen the scope of the evaluation. Sieber (1973) has noted that quantitative findings can augment the findings of qualitative research.

The combination of methodologies, or in the case of evaluative research, using both qualitative and quantitative strategies to study the same program, is defined as triangulation by Patton. He cites Denzin's (1978, p. 28) explanation of the logic of triangulation based on the premise that

> . . . no single method ever adequately solves the problem of rival causal factors . . . Because each method reveals different aspects of empirical reality, multiple methods of observations must be employed. This is termed triangulation. I now offer as a final methodological rule the principle that multiple methods should be used in every investigation (cited in Patton, p. 109).

Characteristically, a multiple-model design involves what Patton has called "ebb and flow" or "moving in and out of periods when the investigator is open to new inputs in data and periods when the investigator is testing out hunches, ideas, and explanations" (p. 185). Guba (1978) has described this movement back and forth between the discovery mode and the verification mode as a kind of "wave".

Application of the Multiple-Model Design in the Louisiana Study

The Statewide Evaluation of the Early Education Program for Handicapped Children in Louisiana, undertaken as a cooperative agreement between the USOE and the Louisiana State Department of Education, began in January, 1985, and was completed in June, 1986.

The evaluand was a complex program serving almost 5,000 handicapped preschoolers and their parents statewide. As many as 17 different kinds of services were provided in home-based, center-based, and combination program formats.

Among the challenges faced by the evaluators were the following:

1. Avoiding application of preconceptions of what the evaluators thought the program models would or should look like;

2. Identifying persons who would be sources of thick, descriptive data;

3. Identifying and studying issues that were field-based rather than literature-based;

4. Selection of appropriate outcome measures that could provide some indication of effect while allowing for the different exceptionalities represented in this particular student population;

5. Determining what factors should be used as the basis for the sampling framework;

6. Developing access strategies that would facilitate data collection and allay fears of personnel accustomed to being monitored for compliance;

7. Resolving the logistical problems related to travel across the state, uniformity of observation times, and use of available staff;

8. Tailoring interview protocols and survey instruments to the 17 different data sources;

9. Selecting an observation instrument that would provide the evaluators with the desired consistency and objectivity, and yet, allow for a rich description of the learning environment;

10. Achieving an optimum return with respect to the survey segment; and

11. Seeing that the interim and final reports were of use and used.

In attempting to meet these challenges, the evaluators used a multiple-model approach and designed the study to consist of four major segments or waves: (1) **a prefatory naturalistic inquiry**, the purpose of which was to lay the foundation for the design matrix (a two-axis matrix summarizing the data elements to be collected and the data sources); (2) **first-wave case studies**, the purpose of which was to develop data-collection strategies and instruments that were specific to the identified service roles; (3) **second-wave case studies**, the purpose of which was to field test and refine the 13 role-specific instruments; and (4) **third-wave research**, the purpose of which was to integrate the case-study/observation component with a major data-collection effort that consisted of surveys of all service providers and parents, an interagency focus group interview, and the aggregation statewide of class and individual student profiles containing selected outcome data.

The multiple wave design of the study resulted in a movement from naturalistic inquiry and qualitative methodology during the prefatory study and the first wave to an intermingling of qualitative and quantitative approaches during the second and third waves. As a result of the use of a multiple-model design, the findings of the statewide evaluation were based upon 12 case studies, 59 observations in 39 LEA programs, 570 surveys/questionnaires, 1020 personal interviews, a 14-agency group interview, 303 class profiles, 606 individual student profiles, and 992 hours of field work.

Prefatory Naturalistic Study

The **purpose** of the preliminary naturalistic study was to provide a foundation for the design matrix and to check the appropriateness of evaluation components considered for inclusion in the study on the basis of related research. The design matrix can be visualized as a matrix with two axes, one reflecting the data elements to be collected and one reflecting the sources from whom or from which the information was to be collected. This matrix was valuable in recording the persons who were the optimum sources of certain information, and in deciding when triangulation was the desired option.

This segment involved case-study methodology and a qualitative approach to gathering data in a variety of sites that included a neonatal intensive care unit (NICU), an early intervention program (EIP), a residential (hospital) facility, and 11 LEA-sponsored classes for handicapped preschoolers. While the sampling for all subsequent waves of the study was

random, the sampling for the naturalistic inquiry was predicated upon location convenient to the SDE. Even though random sampling was not used, this segment did include programs representing the three formats: (1) Center-based: Children received services in a traditional school setting, a special education center, or in a residential hospital; (2) Home-based: Children received services in their homes or in daycare facilities; and (3) Combination center-based/home-based: Children received the core instructional program in their homes or daycare facilities, but they traveled to a center for related services, like speech therapy.

The **procedure** for the naturalistic inquiry required that a team of two evaluators immerse themselves in the children's learning environments, gathering "thick," descriptive data about the numbers and kinds of children served; the numbers, kinds, qualifications, and experience of service providers; the quality of early learning environments; the coordination within the program; the coordination between program staff and related service agencies and/or kindergarten teachers receiving "graduates" of the preschool program in their classes; and the perceptions of parents related to the efficacy of the program. Extensive observations and personal interviews with staff and parents were conducted at the 14 different sites during this phase of the study.

The outcomes of the naturalistic study were sufficient to have warranted inclusion of such a segment in the overall study. Discrepancies in different data bases revealed that the reported number of children being served by the program varied from approximately 2,000 according to one source to almost 7,000 according to another source. The field-based methodology permitted the evaluators to determine the most accurate source of information, which was the regional coordinators' hand-collected October enrollment data.

During this segment, the evaluators' ideas about what the program models would or should be were modified, as preconceptions fell by the wayside. The models were not, for example, brimming over with volunteers. Nor were they characterized exclusively by underprivileged children of one race. The kinds of children being served seemed endless. The educational program in some settings was similar to what one thinks of as traditional education, while in others, the educational program consisted of womb simulation activities.

The evaluators learned that they would have to overcome fears of personnel from the state-agency level all the way down to the individual classroom level if they were to gather meaningful data. These fears related to what the evaluators came to call the "monitoring-for-compliance mind set." Accustomed to having cumulative folders scanned, timelines checked, and adherence to prescribed procedures monitored, the personnel initially responded to questions by quoting chapter and verse of the regulations. Taking the time to explain the evaluation to everyone from the Assistant Superintendent for Special Education Services at the state level to the classroom teachers whose classes the evaluators were observing at the local level paid dividends. Taking care to establish channels of communication with no missing links from the state to the individual-school-campus level, the evaluators not only asked permission for entry and explained the study going into the programs, but they also took care to debrief and reassure on the way out of the programs.

Gradually, the evaluators were able to get even the most skeptical personnel to open up and be candid about the program, its shortcomings, and its successes. The key to this success seemed to lie in the realization on the part of the program personnel that this evaluation was, in essence, their

evaluation. Their role was to facilitate the evaluators' learning about their program.

A "buy-in" attitude was apparent. The persons interviewed began to demonstrate feelings of ownership toward the study, and they were quick to identify information needs the study could meet. The result was the collection of information that both the evaluators and data sources viewed as having utility and applicability at the decision-making level and at the level of program implementation. LEA supervisors, for example, were anxious to learn about the factors that teachers identified as relating to stress and burnout. The supervisors were particularly interested in identifying factors over which they had some control.

The evaluators enjoyed an additional dividend when they learned that positive information about the study preceded them on visits to some of the LEA programs. Program personnel were familiar with the study, either from word of mouth, highlights in the regularly published LEEP (Louisiana Early Education Program) newsletters, brief addresses given at conferences and regional meetings, or letters distributed by the evaluators. Fewer and fewer shields seemed to be in place as the evaluators visited site after site.

By the end of the naturalistic inquiry, 17 different "person" data sources had been identified. The evaluators were learning that information tended to be source specific and that not all interview questions were appropriate for all sources interviewed.

It was also during this segment of the study that the evaluators realized that some means of describing the different kinds of children and their learning environments had to be found and that timing was an important factor in getting such a description. Having learned that afternoons were given primarily to nap and rest periods, the evaluators knew now that morning observations would be imperative. Travel, preliminary visits to LEA supervisors, etc., would have to be done in the afternoons and evenings.

Having taken careful note of the complexity of the program, the variety and schedule of services provided, and the monitoring concerns of some of the staff, the evaluators planned access strategies that would facilitate entry into the programs, expedite access to program staff and parents to be interviewed, and allay fears related to the monitoring mind set. These plans were specific and dealt with a broad spectrum of things which included the LEA superintendents' permission to enter programs, the special education supervisors'/early childhood coordinators' provision of service providers' schedules, arrangements for school administrator interviews, travel arrangements that accommodated early morning classroom observations, and even the organization of data cards containing the names of the LEA programs, a listing of school sites to be observed and directions to the sites, the names of the school administrators and teachers whose classes were to be observed, the type (categorical/noncategorical) of each class, and the estimated arrival and departure times of the children at each site.

First-Wave Case Studies and Applied Qualitative Methodology

The first wave of the study continued the **combination of case-study methodology and a qualitative approach to collecting data.** However, in a move away from the naturalistic inquiry, the evaluators compiled a core of interview questions based upon the information collected during the prefatory naturalistic inquiry. Responses were recorded and used in the subsequent

waves to structure multiple-choice questionnaires. All persons interviewed were encouraged to critique the content, format, and scope of the interview questions.

The sample for this segment consisted of a **stratified random sample of nine classes in four different programs representing the identified program formats.** One hundred percent of the service providers were interviewed, and 100 percent of the classes were observed.

The **procedure** for the first wave was similar to that used in the naturalistic inquiry in that the evaluators immersed themselves in the programs for extended periods of time, observing the children in their learning environments and interviewing parents, kindergarten teachers, and representatives of the 17 different kinds of service providers. One of the major procedural concerns during this segment was the vivid portrayal of the early childhood learning evironment to the audiences for the evaluation. Although the evaluators tried visual images, sketches and verbal descriptions, these proved unsatisfactory in conveying the feeling of being in the classroom. Instead, they turned to standardized instruments, and after examining several, decided to use the Early Childhood Environment Rating Scale (Harms and Clifford, 1980). By using this instrument the evaluators were able to describe accurately the facilities, furnishings, materials and equipment; the scheduling and other provisions for meals, snack, naps, and toileting; and the language, motor, socialization, and self-help activities of the preschool classroom.

The design matrix was expanded to include issues that surfaced during the field interviews and observations. Using the matrix, the evaluators constructed items for the role-specific surveys that permitted them to study these issues. These issues included, for example, efficacy versus complacency in child search activities; efficacy and costs of extended-year services; implications of maintenance-of-health procedures (intermittent clean catheterization, suctioning, and tube feeding, for example); strengths, weaknesses, and cost-effectivenss of home-based versus center-based programs; legal issues related to the provision of indirect therapy; and developmental versus preacademic curricula for preschool-aged children.

The evaluators were able to revise the data-collection instruments overnight. Therefore, they could go back into the field the next day with the revised instruments. By its conclusion, the first-wave methodology had resulted in the development of 13 data-collection instruments tailored to the different types of identified service providers and service recipients.

During this wave the evaluators collected information about the instruments the teachers were using to measure student growth. They also examined the possibility of doing additional testing to measure growth.

Second-Wave Case Studies and Movement to Incorporate A Quantitative Approach

A stratified random sample of nine classes in eight different programs was selected for the second wave. **Procedures** in this wave involved observing 20 percent of the classes in each program and interviewing 100 percent of the service-role representatives. Approximately six hours were spent at each site, as the evaluators completed classroom observations lasting a minimum of three hours; conducted interviews with staff, parents, and kindergarten teachers; and fieldtested the 13 surveys/questionnaires.

The use of both the qualitative interviews and the surveys/questionnaires during this wave enabled the evaluators to complete the final drafts of 13

role-specific data-collection instruments. The flexible design also permitted the evaluators to fieldtest the Early Education Environment Rating Scale (Harms & Clifford, 1980), which was found to be the instrument that provided the most comprehensive information about the preschool learning environments and maximized consistency in reporting the data.

The debriefing sessions with the evaluation's primary audiences during and after the second wave assured the evaluators of the continued support and cooperation of the regional coordinators, the special education supervisors, and the members of the Advisory Team. These sessions also enabled the evaluators to make certain that **the information needs of the primary audiences were being addressed.** Using the input from these groups, the evaluators made the necessary modifications to the study as it progressed. This flexibility resulted in a **self-informing design** that was in place through the last field observation.

At the conclusion of this wave, the evaluators compiled a summary of the instruments that teachers were using to measure student growth. Despite the fact that the regional coordinators had anticipated three instruments, the evaluators identified a minimum of 30. Frequency of use was recorded for each instrument, and the top two were identified for use in the final wave of the study. These instruments provided outcome data in the areas of fine motor skills (writing and manipulation), gross motor skills (body and object), self-help skills, emotional/social development, and language development. In addition, the evaluators used the kindergarten teachers' rating of "graduates" of the program, parents' reports of effects upon the child, the siblings, and the family unit, and exit placement data as additional outcome measures.

Between the second and third waves of the study, the evaluators spent two weeks practicing the use of the environment rating scale in order to establish a satisfactory level of interrater reliability. These practice sessions were completed on site in preschool handicapped classes. Kendall's coefficient of concordance was used to analyze the evaluators' ratings and to establish interrater reliability. These practice sessions were done after one of the authors of the scale conducted a two-day training for the evaluators.

Intermingling of Approaches during the Third Wave of the Study

The purposes of the third wave were to implement fully the survey data collection via the use of role-specific instruments; to pursue issues and concerns via use of qualitative interviewing strategies; to use a group interview format to complete an interagency case study; to complete a final round of case studies/observations; and to launch a major outcome data collection. The use of the multimethod approach during the third wave of the study involved 27 observations/case studies in 21 different LEA programs; personal interviews with program staff, parents, and kindergarten teachers; the collection of survey data from a stratified sample of the 17 identified service providers; and the building of a data base containing demographic, exit-placement, and performance data on more than 600 children enrolled in the program statewide. The data base also included profiles for more than 300 classes statewide.

The personalization of the mail survey and the telephone follow-up no doubt played a part in the 77 percent return achieved during this segment of the study. Even though the class and individual profiles were of considerable length and required a substantial amount of time for the teachers to complete, a 78 percent return was achieved. A letter apprising the teachers of the

importance of the outcome data collection and asking them for their cooperation was sent out before the actual survey was mailed.

Model-Related Results

The results of the multimethod approach used during the third wave included the identification of issues that had not surfaced during the preceding waves of the study, investigation of these issues via a core of qualitative interview questions, triangulation using a representative sample of data sources and both qualitative and quantitative data-collection methods, and the construction of one of the most extensive data bases for the handicapped preschool population in the nation. Thus, using a **self-informing design**, the evaluators were assured that the content of the study was not obsolete by the end of the 18-month evaluation.

Conclusions

In conclusion, the multimethod approach used in the Louisiana study facilitated the identification and investigation of the following issues:

1. Strengths, weaknesses, and cost-effectiveness of home-based versus center-based programs;
2. Efficacy, cost, and appropriateness of extended-year services;
3. Difficulties associated with securing professional ancillary services (physical therapy and occupational therapy), particularly in rural areas;
4. Legal issues related to the provision of indirect therapy;
5. Implications of maintenance-of-health procedures (tube feeding, intermittent clean catheterization, and suctioning);
6. Factors related to teacher burnout;
7. Difficulties related to the integration of the staff and children in the program with regular education staff and children;
8. Needs of kindergarten teachers who receive program "graduates";
9. Teacher concerns related to their parent communication skills;
10. Teacher training needs in the areas of administration and scoring of pretests/posttests, as well as in the areas of interpretation and application of the test results;
11. Sharing of students enrolled in the preschool program for handicapped children with other programs required to demonstrate that a certain portion of their student population is handicapped;
12. Controversy between advocates of a developmental approach to the early education of children and the advocates of a preacademic approach;

13. Perceptions of inadequacy and irrelevancy of preservice training for teachers entering the field of early childhood education for handicapped children; and

14. Identification of factors related to stress and burnout among the teachers working in the program.

As noted earlier in this paper, the study's use of the multimethod approach also resulted in a "buy-in" attitude on the part of program personnel at state, regional, and local levels, parents, and kindergarten teachers. Not only was a high level of cooperation achieved, as evidenced by return rates of 77 and 78 percent on surveys/questionnaires, but there were also requests for feedback related to the study's findings--requests for information that would be used at state, regional, and local levels. In direct response to these requests, six non-technical, role-specific reports were written and sent directly to each of the 66 school systems statewide. These were in addition to the complete technical report which was sent to each school system.

Working with the primary audiences as clients throughout the study (from preliminary phases through final debriefings), and especially between the discovery and verification modes used in the waves of the study, resulted in a widened scope of data collection and requests at the regional level for training in use of the observation scale used by the evaluators. Regional coordinators expressed their desire to use the scale to assist teachers in creating high-quality learning environments for children in the program. Supervisors expressed a desire to be apprised of the major burnout factors, so that they could take action to alleviate the burnout problem. State-level personnel requested information from the study that would have required a major needs assessment on their part. This information is to provide the foundation for a seven-year grant designed to plan, implement, and evaluate a comprehensive service delivery model for the handicapped population aged birth to five years.

The products that were developed during this study were shared with special education program personnel, early childhood program personnel, state education agencies, local school districts, university researchers and evaluators, and private research firms. The products were aggressively marketed and, as a result, the evaluators have responded to requests for information from more than 30 states and two foreign countries. Based on these and similar requests from within the state, the evaluators feel strongly that the multiple model approach was efficacious in providing information that has utility and applicability for program personnel, parents, and kindergarten teachers. And they have had the satisfaction of seeing the products put to use to provide a better education for young children.

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